



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,404	04/19/2004	Richard Vanderpoel	34090-06299	9897

25243 7590 09/23/2005

COLLIER SHANNON SCOTT, PLLC  
3050 K STREET, NW  
SUITE 400  
WASHINGTON, DC 20007

EXAMINER
----------

ESHETE, ZELALEM

ART UNIT	PAPER NUMBER
----------	--------------

3748

DATE MAILED: 09/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/826,404

Applicant(s)

VANDERPOEL, RICHARD

Examiner

Zelalem Eshete

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,9-13 and 20 is/are rejected.
- 7) ☒ Claim(s) 3-8 and 14-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

1. Claim 20 is objected to because of the following informalities: The claim is a duplication of claim 12. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1,10 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyachi et al. (5,960,756).

Regarding claim 1: Miyachi discloses a system for actuating at least one engine valve in an internal combustion engine with valve seating control, said system comprising a housing (see figure 7), a lost motion system disposed in said housing (see numeral 20), a rocker arm having a first contact surface, a second contact surface, and a third contact surface (see numeral 15), the first contact surface operatively contacting the engine valve (see numeral 54), and the second contact surface operatively contacting said lost motion system (see numeral 20), and a valve seating device

disposed in said housing, operatively contacting the third contact surface (see numeral 45).

Regarding claim 10: Miyachi discloses the second contact surface is between the first and third contact surfaces (see figure 7).

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 13 is rejected under 35 U.S.C. 102(e) as being anticipated by Uludogan et al. (2004/0065285).

Uludogan discloses a system for controlling the seating velocity of an engine valve in an internal combustion engine (see figure 1a), said system comprising: a housing (see numeral 62); a lash piston slidably disposed in a bore formed in said housing (see numeral 53), said lash piston having a cavity formed therein (see numeral 50), and a seating piston slidably disposed in the cavity (see numeral 48).

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2,9,11,12,20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyachi in view of Uludogan.

Regarding claim 2: Miyachi discloses the claimed invention as recited above; however, fails to disclose the valve seating device further comprises a lash piston slidably disposed in a bore formed in said housing, said lash piston having a cavity formed therein; and a seating piston slidably disposed in the cavity.

However, Uludogan teaches the valve seating device (see figure 1a) further comprises a lash piston slidably disposed in a bore formed in said housing (see numerals 53,62), said lash piston having a cavity formed therein; and a seating piston slidably disposed in the cavity (see numerals 50,48).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the stationary valve seating device of Miyachi by providing a dynamic valve seating device as taught by Uludogan in order to improve the performance of the system by using a seating device that can change accordingly.

Regarding claim 9: Miyachi discloses the claimed invention as recited above; however, fails to disclose the lost motion system comprises: a master piston slidably disposed in a bore formed in said housing; and a slave piston slidably disposed in said master piston.

However, Uludogan teaches the lost motion system (see figure 1a) comprises: a master piston slidably disposed in a bore formed in said housing (see numeral 53); and a slave piston slidably disposed in said master piston (see numeral 48).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the single piston device of Miyachi by providing a plurality of pistons as taught by Uludogan in order to improve the performance of the system by increasing the control variables.

Regarding claim 11: Miyachi as modified above provides both the lost motion and the valve seating devices adapted to receive hydraulic fluid from a common fluid supply source.

Regarding claims 12,20: Uludogan discloses the valve seating device has a unique position when the engine valve is closed (see figure 1a).

***Allowable Subject Matter***

3. Claims 3-8, 14-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

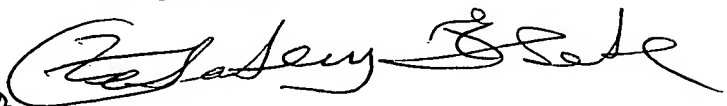
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zelalem Eshete whose telephone number is (571) 272-4860. The examiner can normally be reached on Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Zelalem Eshete  
Examiner  
Art Unit 3748

  
THOMAS DENION  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700